CLAIMS

What is claimed is:

1. A wireless communication unit arranged and constructed for operation within a loosely coupled communication network comprising a first communication network and a second communication network, the wireless communication unit comprising:

a transceiver configured to support an air interface with the first communication network and with the second communication network; and

a controller arranged to control and cooperatively operate with the transceiver to place an active call on-hold to provide an on-hold call at the first communication network and thereafter retrieve the on-hold call from the first communication network while the wireless communication unit is operating in the second communication network via a call leg established for coupling the on-hold call to the wireless communication unit.

2. The wireless communication unit of claim 1 wherein the controller cooperatively with the transceiver is operable to determine that a handout from the first communication network to the second communication network is desired and responsive thereto one of i) passively establish the call leg by receiving and connecting to a call with the first communication network via the second communication network, the call corresponding to the on-hold call and ii) proactively establish the call leg by initiating the call and connecting to the call through calling, via the second communication network, a handout number that terminates in the first communication network thereby resulting in the on-hold call being connected to the call.

3. The wireless communication unit of claim 2 wherein the controller distinguishes the call from other calls within the second communication network by comparing call information to expected call information.

4. The wireless communication unit of claim 2 wherein the on-hold call is one of a plurality of on-hold calls and the controller orders local on-hold call information corresponding to the plurality of on-hold calls according to an order for connecting the plurality of on-hold calls to the call.

5. The wireless communication unit of claim 4 wherein the controller orders the local on-hold call information according to an on-hold time for each of the plurality of on-hold calls.

6. The wireless communication unit of claim 2 further comprising a user interface and wherein, responsive to an indication from the user interface, the controller cooperatively with the transceiver connects the call and the user interface provides updated information for the on-hold call corresponding to the call.

7. The wireless communication unit of claim 2 wherein the controller cooperatively with the transceiver places the call on-hold at the second communication network by sending hold information corresponding to the call to the second communication network.

8. The wireless communication unit of claim 7 further comprising a user interface and wherein the establishment of the call leg and the sending hold information corresponding to the call are done automatically and the user interface maintains on-hold information for the on-hold call, the on-hold call now corresponding to the call that is placed on-hold at the second communication network.

9. The wireless communication unit of claim 7 wherein the controller cooperatively with the transceiver, after placing the call on-hold at the second communication network, facilitates establishment of an other call leg by connecting to an other call with the first communication network via the second communication network that corresponds to an other on-hold call placed on-hold at the first communication network and places the other call on-hold at the second communication network by sending hold information corresponding to the other call to the second communication network.

10. The wireless communication unit of claim 7 wherein the controller cooperatively with the transceiver, after placing the call on-hold at the second communication network, facilitates establishment of an other call leg by connecting to an other call with the first communication network via the second communication network that corresponds to an other active call at the first communication network.

11. The wireless communication unit of claim 1 further comprising a user interface wherein the controller cooperatively with the transceiver is operable to determine that a handout from the first communication network to the second communication network is desired and responsive thereto, automatically and while maintaining the on-hold information for the on-hold call at the user interface:

take the on-hold call off of hold at the first communication network by sending hold information to the first communication network to provide a corresponding active call;

establish the call leg by initiating and connecting to a call through calling a number that results in the on-hold call that is taken off of hold at the first communication network being connected to the call; and

place the call on-hold at the second communication network by sending hold information corresponding to the call to the second communication network.

12. A communication network switch operable to route calls for a first communication network, the communication network switch comprising:

a switching function operable to couple the first communication network to a second communication network, where the first communication network and the second communication network comprise a loosely coupled communication network; and

a controller arranged to control and cooperatively operate with the switching function to place an active call on-hold responsive to a signal from a communication unit to provide an on-hold call at the first communication network and thereafter couple, via a call leg to the second communication network, the on-hold call to the wireless communication unit, the call leg established for coupling the on-hold call to the wireless communication unit after a handout of the wireless communication unit and while the wireless communication unit is operating in the second communication network.

13. The communication network switch of claim 12 wherein the controller and the switching function and responsive to determining that a handout from the first communication network to the second communication network is desired is further operable to one of i) proactively establish the call leg by forwarding, via the second communications network, the on-hold call to the wireless communication unit and ii) passively establish the call leg by receiving a call from the wireless communication unit via the second communication network that is directed to a handout number and, responsive to receiving the call, connecting a peer call leg of the on-hold call to the call leg as an active call.

14. The communication network switch of claim 13 wherein the controller cooperatively with the switching function is further operable to hand out an active call for the wireless communication unit at the first network by establishing an other call leg by forwarding, via the second communications network, the active call for the wireless communication unit one of i) after the on-hold call has been forwarded and responsive to the on-hold call being connected by the wireless communication unit and ii) prior to the on-hold call being forwarded to the wireless communication unit.

15. The communication network switch of claim 13 wherein the controller cooperatively with the switching function is further operable to hand out an active call for the communication unit at the first network after the coupling of the on-hold call to the wireless communication unit by establishing an other call leg by receiving an other call from the wireless communication unit via the second communication network that is directed to an other handout number and, responsive to receiving the other call, connecting the active call to the other call leg.

16. The communication network switch of claim 13 wherein the on-hold call is one of a plurality of on-hold calls and the controller is operable to order the plurality of on-hold calls according to a predetermined attribute of the respective on-hold calls, thereby insuring that the communication network switch and the wireless communication unit have a common reference for any one of the plurality of on-hold calls.

17. The communication network switch of claim 16 wherein the controller cooperatively with the switching function is further operable to hand out an other on-hold call for the wireless communication unit at the first communication network by establishing an other call leg by forwarding, via the second communications network, the second on-hold call to the wireless communication unit after the on-hold call has been forwarded and connected by the wireless communication unit.

18. The communication network switch of claim 16 wherein the controller cooperatively with the switching function is further operable to hand out an other on-hold call for the wireless communication unit at the first communication network after the on-hold call has been connected to the call leg by establishing an other call leg by receiving an other call from the wireless communication unit via the second communication network that is directed to a second handover number and, responsive to receiving the other call, connecting the other on-hold call to the other call leg.

19. The communication network switch of claim 13 wherein the controller cooperatively with the switching function and responsive to determining that a handin of the wireless communication unit from the second communication network to the first communication network is desired, establishes an active call leg with the wireless communication unit in the first communication network and connects the call leg to the active call leg, thereby connecting the on-hold call to the wireless communication unit via the first communication network.

20. The communication network switch of claim 19 wherein the controller cooperatively with the switching function receives a signal from the wireless communication unit directing that the active call leg be placed on hold, thereby completing a process of handing out the on-hold call from the first to the second communication network where it is placed on hold and subsequently handing back in the on-hold call resulting in the on-hold call being on-hold again at the first communication network.

21. A method of synchronizing call appearance information between a network switch and a wireless communication unit operable in a loosely coupled network comprising a first communication network and a second communication network, the method comprising;

determining, after an absence, that the wireless communication unit is again present in the first communication network;

and exchanging messages between the wireless communication unit and the network switch to provide a listing of call appearance information for calls corresponding to the wireless communication unit.

22. The method of claim 21 wherein the determining that the wireless communication unit is present comprises exchanging a session initiation protocol (SIP) INVITE message between the wireless communication unit and the network switch, the SIP INVITE message further comprising a presence state.

23. The method of claim 22 wherein the exchanging messages further comprises exchanging a SIP OK message including a portion of the listing of call appearance information, the SIP OK message directed to the wireless communication unit.

24. The method of claim 22 wherein the exchanging messages further comprises exchanging a plurality of SIP NOTIFY messages, the plurality of SIP NOTIFY messages collectively including the listing of call appearance information, the call appearance information further comprising one of a call identifier, a From field, a To field, a call state field, and session description protocol information.

25. A method in a communication network switch for routing calls to a wireless communication unit operating in a second communication network, a first and the second communication network comprising a loosely coupled network, the method comprising:

placing an active call on-hold responsive to a signal from a communication unit to provide an on-hold call at the first communication network;

establishing a call leg for coupling the on-hold call from the first communication network to the second communication network; and

coupling the on-hold call, via the call leg, to the wireless communication unit, after a handout of the wireless communication unit and while the wireless communication unit is operating in the second communication network.

26. The method of claim 25 further comprising:

determining that a handout from the first communication network to the second communication network is desired: and

the establishing a call leg is responsive to the determining and further comprises one of;

i) proactively establishing the call leg by forwarding, via the second communications network, the on-hold call to the wireless communication unit as an active call; and

ii) passively establishing the call leg by receiving a call from the wireless communication unit via the second communication network that is directed to a handout number and, responsive to receiving the call, connecting the peer leg of the on-hold call to the call leg as an active call.

27. The method of claim 26 further comprising handing out an active call for the wireless communication unit by establishing an other call leg by forwarding, via the second communications network, the active call to the wireless communication unit, one of i) after the on-hold call has been forwarded and responsive to the on-hold call being connected by the wireless communication unit and ii) prior to the on-hold call being forwarded to the wireless communication unit.

28. The method of claim 26 further comprising handing out an active call after the coupling of the on-hold call, via the call leg, to the wireless communication unit by establishing an other call leg by receiving an other call from the wireless communication unit via the second communication network that is directed to a second handout number and, responsive to receiving the other call, connecting the active call to the other call leg.

29. The method of claim 26 wherein the on-hold call is one of a plurality of on-hold calls and the method further comprises ordering the plurality of on-hold calls according to a predetermined attribute of the respective on-hold calls, thereby ensuring that the communication network switch and the wireless communication unit have a common reference for any one of the plurality of on-hold calls.

30. The method of claim 29 further comprising handing out a second on-hold call for the communication unit at the first communication network by establishing an other call leg by forwarding, via the second communications network, the second on-hold call to the wireless communication unit after the on-hold call has been forwarded and connected by the wireless communication unit.

31. The method of claim 29 further comprising handing out a second on-hold call for the communication unit after the on-hold call has been connected to the call leg and thus to the wireless communication unit by establishing an other call leg by receiving an other call from the wireless communication unit via the second communication network that is directed to a second handout number and, responsive to receiving the other call, connecting the second on-hold call to the other call leg.

32. The method of claim 26 further comprising:

determining that a handin of the wireless communication unit from the second communication network to the first communication network is desired; and

establishing, responsive to the determining that a hand in is desired, an active call leg with the wireless communication unit in the first communication network: and

connecting the call leg to the active call leg, thereby connecting the on-hold call at the second communication network to the wireless communication unit via the first communication network.

33. The method of claim 32 further comprising:

receiving a signal from the wireless communication unit directing that the active call leg be placed on hold, thereby completing a process of handing out the on-hold call from the first to the second communication network where it is placed on hold and subsequently handing back in the call resulting in the on-hold call being on-hold again at the first communication network.